

AMENDMENTS IN THE CLAIMS:

Claims 1-36: (See Original Patent)

Claims 37-43 have been amended previously as follows:

37. (Twice Amended) A method for scrambling input data, comprising the steps of:
generating scramble data having a value which is randomly determined;
generating a pseudo-random number sequence in accordance with the value of the scramble data; and
generating scrambled data by performing a logical operation on the pseudo-random number sequence and said input data.

38. (Previously Presented) A method according to claim 37, wherein the value of the scramble data is randomly determined on a data unit basis, and each data unit has a predetermined size.

39. (Once Amended) A method for recording information onto a recording medium, comprising the steps of:
generating scramble data having a value which is randomly determined;
generating a pseudo-random number sequence in accordance with the value of the scramble data;
generating scrambled data by performing a logical operation on the pseudo-random number sequence and input data; and
recording the scramble data and the scrambled data onto the recording medium.

40. (Previously Presented) A method according to claim 39, wherein the value of the scramble data is randomly determined on a data unit basis, and each data unit has a predetermined size.

41. (Once Amended) A recording medium for recording information thereon,
wherein scramble data and scrambled data are recorded onto the recording medium,
the scramble data has a value which is randomly determined,
and the scrambled data is obtained by generating a pseudo-random number sequence in accordance with the value of the scramble data and by performing a logical operation on the pseudo-random number sequence and input data.

42. (Previously Presented) A recording medium according to claim 41,
wherein the value of the scramble data is randomly determined on a data unit basis,
and each data unit has a predetermined size.

43. (Previously Presented) A method according to claim 37, further comprising the steps of:
modulating the scrambled data;
obtaining a calculated value of representing a difference between a number of 0 bits and a number of 1 bits included in the modulated scrambled data;
determining whether or not a variation of the calculated value has exceeded a predetermined threshold value;
newly generating further scramble data having a value which is randomly determined;
newly generating a further pseudo-random number sequence in accordance with the value of the newly generated scramble data; and
newly generating further scrambled data by performing the logical operation on the newly generated pseudo-random number sequence and the input data.